CLAIMS

What is claimed is:

1.   A discrete cosine transform (DCT)-based motion image encoding method that uses a plurality of modified quantization weight matrices, the method comprising:

selecting one of the plurality of modified quantization weight matrices based on noise information from input image data;

performing DCT on the input image data; and

performing quantization on the DCT input image data using the selected modified quanitzation weight matrix.

2.   The method of claim 1, wherein the plurality of modified quantized weight matrices are classified based on the noise information regarding the input image data.

3.   The method of claim 1, wherein the noise information is a ratio of an input image variance to a noise variance.

4.   The method of claim 1, further comprising performing inverse quantization on the quantized data,

wherein the inverse quantization is performed using a default quantization weight matrix.

5.   A DCT-based motion image encoding method, comprising:

creating a modified quantization weight matrix using noise information from input image data;

performing DCT on the input image data; and

performing quantization on the DCT input image data using the modified quantization weight matrix.

6.   The method of claim 5, wherein the noise information is a ratio of an input image variance to a noise variance.

7.   The method of claim 5, further comprising performing inverse quantization on the quantized data,

        wherein the inverse quantization is performed using a default quantization weight matrix.

8.   A DCT-based motion image encoding apparatus that uses a plurality of modified quantization weight matrices, the apparatus comprising:

        a modified quantization weight matrix storage unit which stores the plurality of modified quantization weight matrices;

        a modified quantization weight matrix determination unit which selects one of the plurality of modified quantization weight matrices based on noise information from input image data;

        a DCT unit which performs DCT on the input image data; and

        a quantization unit which performs quantization on the DCT transformed data using the selected modified quantization weight matrix.

9.   The apparatus of claim 8, wherein the plurality of modified quantization weight matrices are classified based on the noise information from the input image data.

10.   The apparatus of claim 8, wherein the noise information is a ratio of an input image variance to a noise variance.

11.   The apparatus of claim 8, further comprising an inverse quantization unit which performs inverse quantization on the quantized data,

wherein the inverse quantization is performed using a default quantization weight matrix.

12. A DCT-based motion image encoding apparatus, comprising:

a modified quantization weight matrix creation unit which creates a modified quantization weight matrix based on noise information from input image data;

a DCT unit which performs DCT on the input image data; and

a quantization unit which performs quantization on the DCT transformed data using the created modified quantization weight matrix.

13. The apparatus of claim 12, wherein the noise information is a ratio of an input image variance to a noise variance.

14. The apparatus of claim 12, further comprising an inverse quantization unit which performs inverse quantization on the quantized data,

wherein the inverse quantization is performed using a default quantization weight matrix.

15. A computer-readable medium having stored thereon computer-executable instructions to perform discrete cosine transform (DCT)-based motion image encoding by:

selecting one of the plurality of modified quantization weight matrices based on noise information from input image data;

performing DCT on the input image data; and

performing quantization on the DCT input image data using the selected modified quanitzation weight matrix.

16. The computer readable medium of claim 15, wherein the plurality of modified quantized weight matrices are classified based on the noise information regarding the input image data.

17. The computer readable medium of claim 15, wherein the noise information is a ratio of an input image variance to a noise variance.

18. The computer readable medium of claim 15, further comprising performing inverse quantization on the quantized data,

wherein the inverse quantization is performed using a default quantization weight matrix.

19. A computer readable medium having stored thereon computer executable instructions to perform a DCT-based motion image encoding method by:

creating a modified quantization weight matrix using noise information from input image data;

performing DCT on the input image data; and

performing quantization on the DCT input image data using the modified quantization weight matrix.

20. The computer readable medium of claim 19, wherein the noise information is a ratio of an input image variance to a noise variance.

21. The computer readable medium of claim 19, further comprising performing inverse quantization on the quantized data,

wherein the inverse quantization is performed using a default quantization weight matrix.